

WHAT IS CLAIMED IS:

1 1. A method of moderating traffic load on network servers in a network where
2 electronic mail is retained for retrieval from at least one mail server, the method
3 comprising:

4 permitting a mail request for a mail client to pass through a proxy server to the
5 mail server; and

6 attenuating subsequent mail requests for the mail client at the proxy server until a
7 predetermined condition has been satisfied.

1 2. The method of claim 1, wherein the predetermined condition is a predetermined
2 period of time.

1 3. The method of claim 2, wherein the predetermined period of time is
2 dynamically determined based on the amount of traffic load on the network.

1 4. The method of claim 1, wherein the predetermined condition is a combination
2 of a predetermined time period and receipt of a notification from the mail server that mail
3 has been received for the mail client at the mail server, whichever occurs first.

1 5. The method of claim 4, wherein the predetermined period of time is
2 dynamically determined based on the amount of traffic load on the network.

1 6. The method of claim 1, wherein attenuating subsequent mail requests is
2 suspended in the event it is determined that a user is manually initiating rapidly repeated
3 mail requests.

8 attenuating subsequent mail requests for the mail client at the proxy server
9 until a predetermined condition has been satisfied.

1 13. The proxy server of claim 12, wherein the predetermined condition is a
2 predetermined period of time.

1 14. The proxy server of claim 13, wherein the predetermined period of time is
2 dynamically determined based on the amount of traffic load on the network.

1 15. The proxy server of claim 12, wherein the predetermined condition is a
2 combination of a predetermined time period and receipt of a notification from the mail
3 server that mail has been received for the mail client at the mail server, whichever occurs
4 first.

1 16. The proxy server of claim 15, wherein the predetermined period of time is
2 dynamically determined based on the amount of traffic load on the network.

1 17. The proxy server of claim 12, wherein attenuating subsequent mail requests is
2 suspended in the event it is determined that a user is manually initiating rapidly repeated
3 mail requests.

1 18. The proxy server of claim 12, wherein attenuating includes blocking the
2 subsequent mail requests from transmission across the network to the mail server.

1 19. The proxy server of claim 12, wherein the predetermined condition is
2 independent of time.

1 ~~20.~~ A mail server for use in a network where electronic mail is retained for
2 retrieval from the mail server, the mail server comprising:
3 a processor, and
4 a memory including software instructions adapted to enable the proxy server to
5 perform the steps of:
6 selecting a time when network bandwidth load is low; and
7 pushing unretrieved mail messages to a proxy server at the selected time,
8 wherein the pushed mail messages are cached at the proxy server.

1 21. The mail server of claim 20, wherein selecting a time is based on when
2 bandwidth load at a predetermined point in the network falls below a predetermined
3 threshold.

1 22. The mail server of claim 20, wherein selecting a time is based on at a
2 predetermined time of day.

1 ~~23.~~ A network comprising:
2 at least one mail server where electronic mail is retained for retrieval by mail
3 clients;
4 a plurality of proxy servers distributed about the network;
5 wherein the mail server caches unretrieved mail messages at the proxy servers.

1 24. The network of claim 23, wherein unretrieved mail messages are cached at a
2 selected time.

1 25. The network of claim 24, wherein the selected time is determined to be when
2 bandwidth load at a predetermined point in the network falls below a predetermined
3 threshold.

1 26. The network of claim 24, wherein the selected time is a predetermined time of
2 day.

1 27. The network of claim 23, wherein the mail server synchronizes with the
2 plurality of proxy servers periodically to ensure that when changes are made to a message
3 on the mail server or on the proxy server that the changes are reconciled.

1 ~~28.~~ A network comprising:
2 at least one mail server where electronic mail is retained for retrieval by mail
3 clients;

4 a plurality of proxy servers distributed about the network;

5 wherein each of the proxy servers comprises:

6 a processor, and

7 a memory including software instructions adapted to enable the proxy

8 server to perform the steps of:

9 permitting a mail request for a mail client to pass through the proxy

10 server to the mail server; and

11 attenuating subsequent mail requests for the mail client at the proxy

12 server until a predetermined condition has been satisfied.

1 ~~29.~~ A network comprising:

2 a mail server where electronic mail is retained for retrieval by mail clients;

3 a plurality of proxy servers distributed about the network;
4 wherein the mail server comprises:
5 a processor, and
6 a memory including software instructions adapted to enable the mail server
7 to perform the steps of:
8 selecting a time when network bandwidth load is low; and
9 pushing unretrieved mail messages to a proxy server at the selected
10 time, wherein the pushed mail messages are cached at the proxy
11 server.

1 30. The network of claim 29, wherein selecting a time is based on when
2 bandwidth load at a predetermined point in the network falls below a predetermined
3 threshold.

1 31. The network of claim 29, wherein selecting a time is based on at a
2 predetermined time of day.